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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/221,291	12/23/1998	MARTIN H. GRAHAM	003921.P005	4813

7590

01/30/2004

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EXAMINER
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BURD, KEVIN MICHAEL

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 01/30/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/221,291

**Applicant(s)**

GRAHAM, MARTIN H.

**Examiner**

Kevin M Burd

**Art Unit**

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

1. This office action, in response to the Request for Continued Examination and amendment filed 1/12/2004, is a non-final office action.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 19-21 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Yerich et al (US 5,562,711).

Regarding claim 19, Yerich discloses a method for encoding a signal shown in figure 3. A first biphasic pulse has a first portion of a first polarity and a second portion of a second polarity. Following the first pulse, a waiting period where no information is sent occurs. After the waiting period, a second biphasic pulse is transmitted, having two portions, one with a first polarity and one with a second polarity. The time periods and amplitudes are also shown in figure 3.

Regarding claim 20, the biphasic pulse has no DC component (column 8, lines 53-65).

Regarding claim 21, the amplitude and pulse width of the pulses are shown in figure 3.

Regarding claim 25, Yerich discloses a method for encoding and decoding a signal shown in figure 3. A first biphasic pulse has a first portion of a first polarity and a second portion of a second polarity. After the waiting period, a second biphasic pulse is transmitted, having two portions, one with a first polarity and one with a second polarity. Yerich also discloses the use of pulse position for encoding and decoding data. A shorter interval may encode a digital "0" bit while a longer interval encodes a digital "1" bit (column 7, lines 10-12). Additional information is found in column 7, lines 13-20.

3. Claims 19-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Gord et al (US 5,562,711).

Regarding claim 19, Gord discloses a method of encoding a signal shown in figure 6. A first biphasic pulse has a first portion of a first polarity and a second portion of a second polarity. Following the first pulse, a waiting period where no information is sent occurs. After the waiting period, a second biphasic pulse is transmitted, having two portions, one with a first polarity and one with a second polarity. The time periods and amplitudes are also shown in figure 6. The biphasic pulse transmission is described in column 16, lines 25-43.

Regarding claim 20, the biphasic pulse has no DC component since the positive amplitude is equal to the negative amplitude.

Regarding claim 21, the amplitude and pulse width of the pulses are shown in figure 6.

Regarding claim 22, figure 6 shows the biphasic pulse is encoded. One amplitude represents a "1" bit while a second amplitude represents a "0" bit.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yerich et al (US 5,562,711).

Regarding claim 24, Yerich discloses a method for encoding a signal stated in paragraph 2. Yerich does not disclose the transmission occurs over a twisted wire pair. However, Yerich discloses the transmission occurs over a wire transmission system in figure 2. It would have been obvious for one of ordinary skill in the art at the time of the invention transmit the signals generated by Yerich in any conventional wired transmission system that allows the information to be received at the desired location free of interference.

5. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gord et al (US 5,999,848)

Regarding claim 24, Gord discloses a method for encoding a signal stated in paragraph 3. Gord does not disclose the transmission occurs over a twisted wire pair. However, Gord discloses the transmission occurs over a wire transmission system in column 16, lines 16-24. It would have been obvious for one of ordinary skill in the art at the time of the invention transmit the signals generated by Gord in any conventional wired transmission system that allows the information to be received at the desired location free of interference.

6. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gord et al (US 5,999,848) in view of Pernyeszi (US 5,969,547).

Regarding claim 23, Gord discloses a method for encoding a signal stated in paragraph 3. Gord does not disclose pulse width encoding data for transmission. Pernyeszi discloses in a variation of such a system, pulse widths carry the information with a pulse's width representing a digital value (column 1, lines 17-25). It would have been obvious for one of ordinary skill in the art at the time of the invention to incorporate Pernyeszi's method of pulse width encoding data into the method of Gord to transmit more information than either system is capable alone. Information can be transmitted over less time and the transmitter will consume less power due to the limited transmission time.

***Contact Information***

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231


**or faxed to:**

(703) 872-9314, (for formal communications intended for entry or for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Burd, whose telephone number is (703) 308-7034. The Examiner can normally be reached on Monday-Thursday from 9:00 AM - 6:00 PM.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800.



Kevin M. Burd  
PATENT EXAMINER  
1/24/2004